OSTEOPATHY

OPPORTUNITIES FOR THE BLIND IN TRAINING AND PRACTICE

By
LELA T. BROWN

American Foundation for the Blind
Vocational Research Series—No. 2

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FOREWORD

NO TEACHER of the blind and no social worker among the blind remains long in his field before he is called upon to give vocational guidance of the most serious import to some sightless person who is searching eagerly for an occupation where his special abilities may count for the most. Such counsel is so vital and far-reaching in its significance to such a person, that it should never be given lightly. At best the man without sight has a difficult road before him. If his directions are not of the wisest he may be launched upon years of preparation for a career, the failure of which might have been foreseen by a well-informed person.

It was with such considerations in mind that the American Foundation for the Blind undertook this study. The facts set forth in it have been collected at first-hand from those in the United States and Canada most competent to speak on the subject. No time nor effort have been spared in obtaining advice from the most outstanding blind osteopathic physicians; and the officers of the American Osteopathic Association have been unstinting in the coöperation which they have extended. The American Foundation for the Blind owes these people a deep debt of gratitude for their help in making this a thoroughly trustworthy report of the subject in hand.

If this work assists any blind person to choose a profession which brings to him something approaching a full measure of satisfaction in life, and if, at the same time, it warns others away from a line of endeavor which would have spelled failure and disappointment, the labor of its preparation will have been well worth while.

Robert B. Irwin

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I

INTRODUCTION

"Each shall follow with cheerfulness the profession which he best understands."—*Horace.*

THE science of healing is a most exacting field. It demands great initiative, confidence and self-direction. "Vocational counseling" in the ordinary sense seems beside the mark. Anyone drawn to this work must discover its possibilities for himself and evaluate his own qualifications. His ability to make this self-analysis is one of the surest tests of his fitness for the profession: if he cannot do this he may be sure that he is on the wrong track. All that a brief study such as this can do is to outline the nature of the work; its obvious requirements, responsibilities and opportunities; and to suggest something of the personality traits which seem to make for success. It is then for the individual to apply the measuring-stick. And in this procedure he should consider all dimensions of his personal status,—the mental, physical, psychological, economic and social. If he is intelligent and conscientious, he will probably arrive at a reasonable estimate of his fitness for the work.

In preparing this pamphlet, the Foundation has held in mind the interests and needs of several groups: First, we have tried to secure information which might be useful to the ambitious under-graduates in schools for the blind, who will soon be faced with the problem of choosing an occupation. We have also been conscious of the needs of the adult blind, who perhaps have drifted into dead-end occupations and who are now casting about for new ways of livelihood or self-realization. Then, too, we have tried to pool and interpret such experience as may be serviceable to those already engaged in the profession. Finally, we have endeavored to respond to calls which come to us from teachers, school administrators and vocational advisors, who are seeking a broader basis in fact and in outlook in their dealings with blind students.

Osteopathy, like any other recognized system of therapeutics, is a highly scientific pursuit, based upon a body of specialized knowledge requiring specialized, technical skill. The course of training is long and expensive; the rewards, once a diploma has been won, come only by arduous, up-hill work and patient optimism. Few professions offer wider opportunities for service; and few require more of those who enter it. It is folly to embark upon so rigorous a career until one's aptitude is weighed and determined. The large percentage of casualties in our professional institutions bear witness to much ill-advised, vocational selection. Dr. Vincent C. Vaughan,* speaking before a body of students at the University of Michigan Medical School, mentions that over a period of ten years "less than 60 per cent of those who have entered this institution have succeeded in winning its diploma, and of those who have gained this distinction not all have fulfilled the confidence imposed in them by the faculty." If this is typical of other schools of therapy—or even if it exaggerates, surely it is well to urge upon prospective students the necessity of an unbiased and objective examination of their abilities before entering a professional school. And if it holds for the so-called normal, it is of even greater importance for anyone bearing a physical handicap which tends to obstruct his progress.

There are certain general principles which experience teaches us to follow in choosing any vocation. We should be mentally, physically and temperamentally adjusted. The environment of our work should energize and stimulate us to our best efforts. We should feel that we are contributing to the well-being of our fellows or to the sum total of human knowledge. Without such fundamentally right conditions we cannot work effectively. In addition to these elementary conditions of success, every vocation has its own peculiar set of personal requirements without which achievement is improbable. In this bulletin we attempt an analysis of these factors as applied to the science of osteopathy. It is hoped that examination of them will encourage those to whom the profession may be a real vocation (by which is meant yielding the satisfactions of a life work); and at the same time will dissuade from entering the field all those who are not properly qualified.

There has been some discussion in osteopathic circles during the last few years as to the eligibility of blind physicians. This study, as the product of a lay organization, cannot, of course, enter into this question where it touches upon matters of scientific procedure. The standing of blind students in colleges of osteopathy and the practice of blind osteopathic physicians should, we believe, determine their admittance to the profession.

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* Vaughan, V. C. "Medicine as a Career." Science, Vol. 44, No. 1145.

Certain general considerations for persons seeking to make a vocational adjustment may not, however, be out of place. First of all, this deviation from the normal which we call a "handicap"—what is it? Has it to do only with imperfections of the physical mechanism, or shall we perhaps more reasonably apply it also to defects in the other aspects of our human nature—mental, social, ethical? If we do, the term "handicap" loses its significance, for who of us can lay claim to *wholeness* and *normality?*

Again, there seems to be some confusion in the use of the words "handicap" and "disability." They are often used synonomously. One wonders why. As a matter of experience we know that any given limitation registers in various degrees upon different individuals. Blindness in one person may impede or completely stall his activities; another, by his ability to call upon other faculties or resources, may so adjust himself that it becomes a negligible factor. Our study has revealed many such instances.

One wonders also if it would not be helpful to blind people in their effort to gain perspective if they were to look at their handicap in a different connotation and setting. Take, for instance, the origin of the word in that sport of obscure history, "hand-in-the-cap," by which in any race or competition an extra weight or other condition is imposed on a superior in favor of an inferior competitor in order to equalize their chances.* In this way "handicap" passed into common parlance as denoting "any encumbrance or disability that weighs upon effort and makes success more difficult."

To some people that encumbrance, that playing against odds, has offered an incentive which they have turned to positive account. We venture the opinion that the race is not necessarily to the strong but to the most keenly challenged. Psychologists also will testify to that mysterious law of compensation whereby nature tends to reassert herself in new channels whenever any given ability is impaired or withdrawn. Illustrations of this are to be found in all

* Some interesting material on this subject may be found in the Oxford English Dictionary.

walks of life.* We do not hold with the fantastic notion, sometimes expressed, that in osteopathy blindness is an asset. We do hold, however, that it need not be an insurmountable barrier. In the present survey, we have come in contact with sightless physicians who, accepting the challenge of their physical limitation, have forged to the front ranks of the profession. This, we believe, is the result of unusual industry, strict attention to detail, and the resourcefulness and courage which their necessity has imposed upon them.

We are conscious of the difficulties which beset a layman in approaching a highly technical pursuit such as osteopathy. For any errors, omissions or mis-interpretations which appear in this report, we can only beg the indulgence of the profession; and remind our readers that our main objective has been merely to give a general picture of the field for the benefit of those to whom it has a vocational interest.

In planning and carrying out this survey, we have been guided by a number of osteopathic physicians, both blind and seeing. The questionnaire used was drawn up in consultation with them; and subsequent conferences have helped in the collection and interpretation of the material. Ninety questionnaires were sent out to blind physicians and students in the United States and Canada. We have had returns from about sixty percent—fifty practitioners and six students. Of these twenty-two were personally interviewed. Interviews have also been held with the presidents or deans of four colleges of osteopathy, and with officers of the American Osteopathic Association.

The material which we have secured has been arranged as follows:

Section II. "The Science of Osteopathy" gives a brief description of the osteopathic school of practice, its beginnings and present developments; the nature of a physician's work and the types of practice which may be followed.

Section III. "Requirements and Rewards" suggests the personal characteristics which make for failure or success, and the rewards which ordinarily belong to a physician.

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* In this connection it is illuminating to read Ralph Waldo Emerson's essay on "Compensation" contained in the volume *Essays, First and Second Series*.

Section IV. "Training and Licensure" analyzes the educational requirements and plan of study and training in colleges of osteopathy; the requirements and operation of state boards of licensure; and the experience of blind students in their college work and in the matter of obtaining a license.

Section V. "The Practice of Blind Osteopathic Physicians" points out some of the special qualifications and conditions by which persons without sight can succeed; describes the nature of their practice as revealed by answers to the questionnaires and their methods of "carrying-on" under various technical demands of the profession.

Section VI. "The Economics of the Profession" discusses ways in which a practice can be successfully built up; and something of the income which may be expected.

Our sincere thanks for assistance are due to the following who have helped in outlining the study and in reading the manuscript: Dr. Erwin I. Schindler, formerly a member of the faculty of the Kansas City College of Osteopathy and Surgery; Dr. J. Francis Smith, a present member of the faculty of the Philadelphia College of Osteopathy; Dr. Ray G. Hulburt, Director of the Committee on Information and Statistics of the American Osteopathic Association; and Mr. Stetson K. Ryan, Secretary, Board of Education of the Blind in Connecticut. To all those who have given so generously of their time in filling out the questionnaire, we are also indebted.

II

THE SCIENCE OF OSTEOPATHY

THE art of healing had progressed long before medicine was recognized as a science. By every-day experience men learned that certain medicines and methods of treatment were effective. In course of time and as science advanced, the reason for the effectiveness of these remedies became known. Modern scientific therapies data from the time of Hippocrates, a Greek philosopher of the fifth century B.C. It was Hippocrates who gave authority to the belief that disease, like life itself, is governed by natural laws—and not by oracular decrees, sorcery, or the position of the stars. It was he who first taught those habits of minute observation and accurate interpretation of symptoms, which are the ground work of modern therapeutics. He also gave to succeeding generations of physicians a high conception of their duties and status, as is shown in the celebrated "Oath of Hippocrates."

Osteopathy, in common with other therapies, is heir to all the accumulated knowledge of the past. Its own distinctive contribution to medical science as developed during the last half century has its origin in ancient practices. Manual methods of treatment seem to have been used by all peoples in all times and places. Early records tell of their use in China, India and Egypt hundreds of years before the Christian era. Explorers among primitive peoples of our own time also report various mechanical methods used in the treatment of disease.*

The osteopathic concept and practice, as we know it today, is little over fifty years old. Its founder, Dr. Andrew Taylor Still, after serving for many years as an allopathic physician, publicly announced his discoveries in 1874. This was about the time when Pasteur, a French chemist, was establishing the germ theory of disease on which modern medicine is based; and Lister, a British surgeon, was introducing antisepsis into surgery. As in the conquest of every field of human knowledge, all these men were fought by the "vested interests" in the medical world. It was only after years of demonstration and proof that their findings were given recognition. The principles of osteopathy are not today accepted by the medical profession as a whole, although there are indications that each school tends to appropriate to itself certain fundamental methods of the other.

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* Many such instances are given in an article by Dr. Ray G. Hulburt: "The Trend Toward Osteopathy." The Journal of the American Osteopathic Association, January, 1928.

Nature of Osteopathy

Some divergence of opinion exists, both among laymen and in the profession itself, as to the basic concept and scope of osteopathy. Some osteopathic physicians think that the science should not replace the so-called regular school of medicine, but should be used in conjunction with other methods for the treatment of disease. The majority of the profession, however, if one may judge from its leading exponents and official publications, hold that osteopathy is a distinct expression of medical science, complete in itself, and capable of dealing with all phases of physical disability and disease. Contrary to the school of medicine which emphasizes chemistry, the osteopathic system stresses structural manipulation and adjustment. Some confusion has arisen as to the exact nature of osteopathic treatment. It is frequently thought of as massage or "bone-setting." Since there is no basis in fact for this confusion, and as it is important for a prospective student to be clear on the point, the following excerpt is given from the Year Book of the American Osteopathic Association:

> "*Definition.* Osteopathy is a knowledge of the structure, relations and function of each part and tissue of the human body, applied to the adjustment and correction of whatever may be interfering with their harmonious operation.
>
> "*Concept.* Osteopathy conceives of man as a bio-mechanism, an organic machine, which, as long as the cells, tissues, organs, muscles, ligaments and bones are normal in themselves, and in their reciprocal relationships, will function normally. It maintains that structural integrity and physiological adjustment of the tissues and fluid-tensions of the organism form the most important factors in maintaining health. Life essentials—food, air, water, light, heat, exercise, protection, rest are necessary, also environmental and psychological harmony; and

> in an organism structurally perfect constitute the requirements of man for maintaining health.
>
> "*Principles and Practice.* The principles of osteopathy follow the logic of an applied knowledge of anatomy—the science of structure; physiology—the science of function; and pathology—the science of disease.
>
> "The principle in diagnosis is to find the structural or other causative factor that is interfering with function; the principle in treatment is to adjust and correct the same. The effort is made to normalize the structures, tensions and pressures so that each tissue, fluid and cell may have an environment within its range of adaptation in which to act and react to the forces and stimuli operating upon or within the body.
>
> "*Scope.* The osteopathic concept includes surgery, which is taught in the osteopathic colleges, while osteopathic physicians practice or recommend surgery when it is indicated. Osteopathy is not a drugless therapy in the strict sense of the word. It uses drugs which have specific scientific value, such as antiseptics, anesthetics, or narcotics for the temporary relief of suffering. It is the empirical internal administration of drugs for therapeutic purposes that osteopathy opposes, substituting therefore manipulation, mechanical measures and the balancing of the life essentials, as more rational and more in keeping with the physiological functions of the body."

Other schools believe with the osteopathic that, after all, nature does the curing; but there is great diversity in the means used to aid nature. The average layman does not, of course, have sufficient information to enable him to discriminate among theories: he judges only by results, and the osteopathic physician has apparently shown creditable results.

Origin and Present Status

The founder of the osteopathic school came of a family of medical men and pioneers. Reared in the austerity and deprivation of frontier life and in close contact with the natural world, he early developed those habits of mind which Dr. Richard Cabot recommends to prospective physicians in order that they may "become versed in the contrasts between man's and nature's ways," and may cultivate that exploring instinct and scientific imagination without which one cannot go far in a therapeutic profession.* For anyone considering osteopathy as a career, it is to be earnestly recommended that he read the accounts of Dr. Still's life and of the discoveries which were later formulated into a system of therapy. This is the surest way not only of *catching the spirit* but of gaining true insight into the meaning and application of this particular science.

After several years of nomadic practice in Missouri and in Iowa, Dr. Still settled in Kirksville and in 1892 opened the American School of Osteopathy. The curriculum at that time was, of course, not so comprehensive as obtains at the present day, although it included practically everything taught in the established medical schools except *materia medica* and major surgery. Surgery was practised when necessary, and the subject was soon included in the course of study. The length of the course, in common with the prevailing standards in the medical schools, was much shorter than it is today. Beginning with twenty months, it was extended in 1904 to three years, and in 1916 to four years of nine months each.

Today the course of study and general requirements parallel those of the medical colleges. In addition to their characteristic methods of treatment, osteopathic students study bacteriology, hygiene, toxicology, surgery, obstetrics, etc. in the same thorough way as the students of the medical colleges. In many states they are required to take the same examination for licensure. They are governed by a similar code of professional ethics.

There are now eight colleges for the training of osteopathic physicians and surgeons with a total student body of about two thousand. They are located in Kirksville, Los Angeles, two in Kansas City, Des Moines, Chicago, Philadelphia and Boston. All these institutions are equipped with modern laboratory, hospital and clinic facilities; and all but two are recognized by the American Osteopathic Association. There are about seventy hospitals and sanitariums and a large number of osteopathic clinics scattered about the country. The total number of practising physicians is something over seven thousand. Progress during the last few years has been marked by the erection of new college buildings and hospitals, improvements in the curricula and teaching staffs, and increased opportunities for students to gain experience in clinics and hospitals.

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* Cabot, R. C. "Training and Rewards of the Physician."

The American Osteopathic Association, with headquarters in Chicago, is the official national organization of the profession. Affiliated with it are many state and regional societies in this country, Canada and Great Britain; the Osteopathic Women's National Association; and several groups of specialists. Various bureaus and committees co-ordinate and standardize the work of educational institutions and hospitals, issue educational literature, compile statistics, encourage laboratory research and other means for further developing the profession.

The growing recognition of osteopathy as a contributory factor to scientific knowledge and the conquest of disease is reflected in its legal status. Since 1896, when Vermont legalized the practice of osteopathy, its status has steadily improved until it is now regulated by law in all the states, Hawaii, Porto Rico, and the District of Columbia, and in some of the provinces of Canada. The conditions of licensure and the scope of practice allowed will be taken up in the following chapter.

A considerable body of scientific literature, including text-books, research reports, works of reference; and a number of professional periodicals are at the disposal of physicians and students. As an agency for testing the validity of Dr. Still's original theories and for further developing osteopathic principles, the A. T. Still Research Institute at Los Angeles has made notable investigations. This work is now advanced through the recent organization of the American Osteopathic Foundation, whose purpose is to promote experimental research, educational facilities, the establishment of hospitals and clinics, and the dissemination of health publications.

Medicine as a Science

The rapid development of scientific knowledge and technique during the last decades has revolutionized medical practice. A generation ago the family physician knew all there was to be known about the "science of medicine." Today medical practice is regarded not so much as a science in itself but as a summation of various sciences. The work of a modern practitioner consists to a great extent in interpreting and correlating the findings of specialists in various fields.

> "The bedside practitioner must apply knowledge supplied by anatomy, physiology, pharmacology, biochemistry, pathology, bacteriology; data derived from records of many cases, and the summarized observations and conclusions of other clinicians. Medicine in this sense is an art based on a science rather than an exact science. When the doctor has at his disposal all the data that modern methods can furnish, temperatures, blood pressures and counts, chemical and bacteriological tests, x-ray plates, reports of similar cases, his own records on remembered experiences, testimony of his own trained senses, he still must interpret all these facts by a careful process of logical reasoning and organize them either into a final judgment, or into a tentative hypothesis which is subject to further tests by later developments."*

This statement by the President of the Rockefeller Foundation applies to medical practice as a whole: it is in the main true for osteopathy, the only difference being that the osteopathic physician, in addition to the agencies mentioned, applies his own specialized technique of manipulation and adjustment.

Types of Practice

Osteopathic practice falls generally into three categories: general practice, involving all types of chronic and acute work; general practice with special attention to a specialty; and practice limited to a specialty. While information is not available for the osteopathic school as such, the following figures derived from a study of graduates of medical schools will show the current drift in medical science.†

	Per cent
General practice	22.9
General practice with specialty	40.5
Limited to specialty	36.1
Not practising	0.5

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* Vincent, George E. "The Doctor and the Changing Order." Survey, January, 1926.

† Weiskotten, H. G. "Present Tendencies in Medical Practice." Bulletin of Association of American Medical Colleges, January, 1927.

Among osteopathic physicians there is probably a higher percentage engaged in general practice than is indicated by this study; and within the field of a general practice, the osteopathic physician has a higher proportion of chronic cases than the medical practitioner. Specialization, however, is increasing rapidly in this as in other schools of practice. Many practitioners of osteopathy confine themselves to certain branches such as surgery, obstetrics, gynecology, muscle re-education, mental and nervous diseases, and eye-ear-nose-and-throat work.

Women in Osteopathy

The field of osteopathy apparently offers many opportunities for women, if one may judge by the number in the profession. The President of the Osteopathic Women's National Association estimates that there are one thousand practising at the present time,—that is, one-seventh of the total number of osteopathic physicians. They are accepted on the same terms as men in all the colleges of osteopathy. The scope of their practice is in no way limited, although many tend to specialize in pediatrics, obstetrics, and gynecology. This study includes seven women physicians without sight.

Group Practice

A comparatively recent development in medicine is group practice, whereby two or more physicians pool their resources and subdivide their work according to the specialties of each member of the group. This banding together of several practitioners is based on the premise that medical science has become too large a field for any one person to cover adequately; that correct diagnosis and treatment is possible only by co-ordinating the work of specialists; and that this can be done most efficiently by a grouping in one building and under one organization. This arrangement obviously works out to the advantage of the patient in that he has the benefit of the experience and judgement of experts in his diagnosis and treatment, and saves considerably in time and expense. The physician gains in that he has more opportunity for clinical study, the impetus toward better work which comes in group association, and greater efficiency and increased income due to the added facilities of office staff and nurses.*

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* E. O. Millay, D. O. "Group Practice." The Forum of Osteopathy. May, 1928.

The extent of organization in group practice ranges from a loose partnership—usually between a general practitioner and a surgeon—to a more highly developed arrangement, combining the efforts of three or four, or of a still larger number of specialists.* The beginnings of such a tendency are apparent in the present study, as will be shown further on.

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* Various schemes of organization are discussed by Walter C. Koltz in "Group Clinics: A study of Organized Medical Practice."

III

REQUIREMENTS AND REWARDS

THE factors of personal endowment which make for success in a therapeutic profession are difficult to gauge and impossible to apply except in relation to the individual. No system of vocational tests, scores or personality ratings has yet been devised to measure a competent physician. The requirements, as the rewards, are difficult to define. Certain qualities of the physical, mental and psychical make-up, however, seem to emerge as characterizing a group of physicians. We arrive at these by a general sizing-up of the osteopathic physicians interviewed in this survey, and by the opinions of others who have attempted an occupational analysis in an allied field.*

So far as this study indicates the factors that contribute to the success of the physically whole person are repeated in the success of the physically limited.

Physical and Mental Equipment

At least a minimum resistance to infection and disease is necessary for a medical practitioner. He is constantly exposed; his opportunity for normal living and recuperation is frequently curtailed. At the best his work is demanding, subject to interruptions, emergencies and periods of protracted strain. He must be able to meet crises with an absence of emotional tension and with an assured endurance. As one of our blind physicians expresses it, he must have "intestinal fortitude." On the positive side of his health account, he should have a substantial balance of vitality with which to meet and reconstruct the depleted resources of his patients. He should be able to draw out the strength, reassurance, and control which will aid in restoring balance and right functioning to a sick body or mind. For a blind person physical health is imperative for the reason that lack of sight exacts an extra toll on the entire nervous organization; and also because of the fact that to many people any type of physical handicap implies a general disability—a fiction which can be dispelled only by unusual health attainments.

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*Cabot, Richard C. "Training and Rewards of the Physician." Hoad, Hortense. "The Profession of Medicine."

A further physical characteristic necessary in the practitioner of osteopathy is tactile sensitivity and mechanical dexterity. He must have skill, precision and strength in his manu-motor reactions. As this, however, is an ability in which the blind are apt to be well-endowed, it requires no emphasis here.

On the intellectual side, a physician must have scientific imagination; that is, he must have an inquiring mind, a curiosity as to how human beings work, what stuff they are made of, and how they can be brought into proper focus and functioning. His attitude is akin to that of the sympathetic and skillful mechanic. The osteopathic system of practice, which emphasizes the concepts of body immunity and body mechanics, will have little use for a person who lacks this basic quality. In addition to creative imagination, the physician has well-developed powers of observation. He can attend to a number of details at once, can keep the parts of a pathological picture in right relation to the whole, can "bind back" and "connect up" and so gain perspective on the sum-total of facts at his disposal. He must, of course, be thorough and honest in his reasoning. He does not jump at conclusions, nor generalize with insufficient data; he does not twist results to suit a preconceived idea. He must also be adaptable and resourceful, able to shift his thinking and his method with facility; able also to turn from one situation or patient to another without a carrying-over of attention or interest. When occasion calls he should be able to act quickly and decisively, and without antagonizing anyone with whom he deals. The opaqueness which antagonism breeds shuts out all possibility of a working relationship between doctor and patient.

Social Traits

Apart from the physical and mental qualifications which have been stressed, certain traits of personality are important. A physician should have confidence in his own judgment and should be able to transmit that confidence to his patients. Without it he cannot obtain the coöperation which is an essential part of diagnosis and treatment. A physician's job, as we have mentioned elsewhere, has to do with human beings—the psychological and social as well as the physical. The ramifications of a case often lead a practitioner far afield from what ordinarily constitutes his work. In order to meet the every-day challenge of sick people, he must be prepared to take the initiative in all manner of problems quite apart from the specific or superficial symptoms with which he is called to deal. And this brings us to the conclusion that a physician should know a good deal about "influencing human behavior," the art of comprehending another person and of making oneself understood. To quote Dr. Cabot again, "the psychical side of practice is more than half of a practitioner's job and makes or mars him,—makes him by honest means or by quackish arts, mars him through his clumsiness or through his onesided concentration on the physical aspects of disease." This conception of the physician calls for a person of parts, of resourcefulness and a broad social consciousness. It also requires an unlimited capacity for self-sacrifice, a deep sense of personal and professional honor, and something of a philosopher and seer.

Rewards

The rewards of a physician, as of anyone who wholeheartedly applies himself to his work, are inherent in the requirements. One receives in proportion as one gives. Apart from the relatively modest income—discussed in a later section—a physician's compensation is in the service he renders human beings. If this reward does not appeal to him as a durable satisfaction, he cannot uphold the best traditions of the profession and therefore should not attempt to enter it.

IV

TRAINING AND LICENSURE

THE technical training of an osteopathic physician is to be acquired in the four-year college course; and, in addition, many serve an interneship in hospital practice. Many things of a non-technical nature, not required for matriculation or for licensure, are nevertheless important for one who aspires to be an all-round physician, capable of dealing with human ailments in all their aspects. As the college curriculum is too crowded to permit of much additional study or exploration, it is well for a student to get as much equipment as he can in the pre-medical period of his education.

The subjects which will be most useful in professional training and practice fall into two groups. First, there are the "tool subjects" of medical science: physics, chemistry and biology. Even when they are not required for entrance, a knowledge of them will be of great advantage to the student entering upon osteopathic training. Latin—enough, at least, to familiarize one with the terminology of the science—is desirable. In a few states, where osteopathic physicians are examined by a medical board, this is specified as one of the high-school subjects. It is also generally recognized that trigonometry, desirable for the proper study of physics, and solid geometry, which lays the foundation for conceptions of space of aid in both anatomy and physiology, are of great value. Modern languages, business principles, and elementary accounting are tools frequently despised but very useful.

A second group of studies has to do with understanding human beings and knowing how to deal with them. A knowledge of disease and physical mal-adjustment does not suffice: every physician can recall cases in which the physical symptoms were merely smoke-screens covering conditions of *dis-ease* in the mental, social or perhaps economic background. Dr. Richard Cabot in his "Training and Rewards of the Physician" lays stress upon the psychical aspect of medical education—"the preparedness for treating a human being as if he possessed a mind, affections, talents, vices, and habits good and bad, as well as more or less diseased organs." He urges medical students to learn all they can of the *human managerie*. "When a doctor is consulted by a stock broker or a cattleman, a laundress or an actress, he needs to know all that he can about what fills their days and their thoughts—the routine detail of their lives, what they take for granted, what they instinctively like and dislike, fear or admire . . . . for these are matters which may form the basis of a correct diagnosis and a successful course of treatment." The study of psychology, sociology, economics, literature—these are some of the means by which one develops the capacity to understand and influence one's fellows.

Osteopathic Training

All institutions recognized by the American Osteopathic Association conform to certain standards laid down by the Bureau of Professional Education, which prescribes minimum requirements for entrance, training and graduation. In all of the six colleges, matriculants must have an accredited high-school course or its equivalent. Two colleges, those at Philadelphia and Los Angeles, require in addition one year of college work in physics, chemistry and biology—a requirement made by some states for permission to take the state board examination.

The recognized colleges of osteopathy give the standard four-year course of instruction officially approved by the Bureau of Professional Education of the A. O. A. This will be found reproduced in detail in the appendices. The general plan of instruction provides that the first and second years be devoted to the fundamental subjects of medical science,—anatomy and histology, physiology, chemistry, pathology and bacteriology. During the second year introductory courses are given in osteopathic theory and practice. The third and fourth years are largely given to the clinical subjects—that is, the technique of diagnosis and treatment. The following typical summary of the college curriculum shows the number of hours given to various departments of study during the four-year course; and the relative amount of didactic, laboratory and clinical work.* From this it will be seen that the didactic work constitutes something over one-half of the total number of hours; the laboratory and clinic each about one-fourth.

* Catalogue of the Los Angeles College of Osteopathic Physicians and Surgeons.

	Didactic	Laboratory	Clinic	Total
Anatomy and Histology	363	407		770
Physiology	121	165		218
Chemistry	110	176		286
Pathology and Bacteriology	154	242		396
Pharmacology	154		8	162
Preventive Medicine	99		55	154
Osteopathic Therapeutics	528		668	1196
Surgery	440		154	594
Obstetrics and Gynecology	165		144	309
Miscellaneous	11			11
	2145	990	1029	4164

Fees and Expenses

Tuition fees in osteopathic colleges range from $150 to $340 a year. Laboratory and student activity fees, books, etc., average $40 to $75 a year. None of the colleges have student dormitories. Out-of-town students usually take rooms near the college or live in groups in club houses. The expense of maintenance will, of course, vary widely with individuals and the location of the college. One college estimates that room and board may be secured from $35 to $80 a month; another from $25 to $50. In general the total yearly expenditure would be from $600 to $1000.

A number of students in colleges of osteopathy help to defray their expenses by part-time employment. A survey of one college shows that about fifty per cent of the students were earning part of their expenses. One blind student, who made the best general average of any member of his class in the examinations of the entire four-year curriculum, earned $85 a month by teaching and tutoring in his junior and senior years. Another sightless student helped with his expenses by combining tutoring and selling magazine subscriptions. Other instances might be given. The vacation months probably offer the best opportunity for building up a financial reserve. Considering the demands of the curriculum upon time and energy, however, it is doubtful if a blind student should undertake any added responsibility during the school-year unless he is unusually well-equipped mentally and physically.

Interneship and Post-Graduate Work

Due to the fact that osteopathy is a departure from the established school of medical therapy, it has not had the benefit of public endowments for its institutions; nor do its students often have access to state, county and municipal hospitals.* Every osteopathic college, however, controls a hospital or is in close affiliation with one in which its students have the advantages of clinical instruction and practice; and, in a certain proportion of cases, of interneship or residence after completing the four-year course.

A number of colleges offer post-graduate courses, designed both to keep members of the profession in touch with current developments, and to furnish intensive instruction in various departments for those who wish to specialize. The usual way of entering upon a specialty is first to gain experience in general practice for a few years; and then gradually to limit the field of practice according to one's special interest and ability. Post-graduate study in a college of osteopathy, interneship in a hospital offering opportunities for advanced training, or work as an assistant to a recognized specialist in the field are ways in which experience may be acquired for specialization.

Licensure

The practice of osteopathy is regulated by all states in the Union and by five provincial governments in Canada. The legal provisions as to the scope of practice allowed and the composition of examining boards vary. A few states limit osteopathic practice to manipulation. Others permit minor surgery and obstetrics; but exclude major surgery and administration of drugs except for anesthetics, antidotes and antiseptics. Other states make no distinction as to schools of therapy, the osteopathic physician receiving the same license and privileges as the graduate of a medical school.

The composition of examining boards is of three types. In some states examination and licensure come under the regular medical board. In a few instances, the medical board is authorized to call in an osteopathic physician to assist in the examination. In thirteen other states "composite" board laws provide for osteopathic representation on the medical board. The predominating type, however, is composed entirely of osteopathic physicians. This last is obviously more favorable to osteopathic practice, as is evidenced by the fact that states with independent boards send twice as many students, in proportion to population, to colleges of osteopathy as do the states having composite or medically dominated boards.

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* Exception is found in the case of the Colleges at Chicago and Los Angeles, where city and county hospitals are open to the osteopathic profession. In Los Angeles, osteopathic physicians are members of the staff of the County Hospital.

The educational requirements of examining boards are usually the standard high-school course or its equivalent and four years of professional training. In two states, California and Pennsylvania, a year of college work in physics, chemistry and biology is also required. In some states granting special surgical licenses, an applicant must have had two years of practice, followed by either two years of post-graduate work in surgery, or one such year and a year's interneship.

In certain states having "basic science boards,"* a person is not eligible for examination unless he presents a certificate of ability in anatomy, physiology, chemistry, bacteriology, pathology, diagnosis and hygiene, issued by the state board of examiners in the basic sciences.

The examination for licensure may be a written test or combination of written and oral. Some states also require a practical test in clinical subjects. Many have reciprocity arrangements so that students taking the examination in one state and having practised there for at least a year, may be licensed without further examination in certain other states.†

TRAINING AND LICENSURE OF BLIND PRACTITIONERS

A blind person contemplating osteopathy as a career may profit by the training experience of other blind people in the profession. A brief summary, also, of their education and occupational background may be of interest.

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* The following states now have basic science laws: Arkansas, Connecticut, Minnesota, Nebraska, Tennessee, Washington, Wisconsin and the District of Columbia. A number of other states are also debating basic science bills.

† Information on legal provisions or any aspect of training and licensure may be secured through the American Osteopathic Association, 844 Rush Street, Chicago.

Of the fifty physicians included in the study, forty-two are entirely without sight. Thirty-two of this number have either attended a school for the blind or sight-saving classes in the public schools. Four took up the study of osteopathy after they had been blinded in the War. All but one had the equivalent of the standard high-school course before their professional training. Fourteen had degrees from institutions of higher learning; two were graduates of law schools; one of a medical school; and two of a school of pharmacy.

Fifty per cent of the total number entered upon their professional training directly from school or college, and so had no occupational experience. Seven had been teachers—in the classics, music, psychology, medicine; and six had been engaged in allied fields of therapy—one as a medical physician, one in physiotherapy, one in massage, one in chiropractic, and two in pharmacy.

Methods of Blind Students

A blind student in a college of osteopathy must, of course, meet the usual entrance requirements, cover the same ground and take the same examinations in all subjects as the seeing student. Certain departments of the curriculum offer no special difficulty; in others, he needs to apply himself rather more closely and to have the assistance of a seeing person in reading and laboratory work. The cost of this assistance should be definitely provided for and arrangements made well in advance of every school year. A sightless student who imposes upon the good will of his instructors or fellows places himself at a grave disadvantage. Unless he is prepared to stand on his own feet, and take the initiative in solving his problems, he should not enter a professional school.

With one or two exceptions all the osteopathic physicians reported in this study had the assistance of a reader. In a few cases, a wife or other relative also taking the course acted in this capacity; but for the majority it has been a fellow student who was paid by the hour or month. Three of our practitioners did not have the systematic services of a reader but took notes in class and studied with classmates. The association with fellow students in study is, of course, valuable; but for the blind person inadequate, unless supplemented by continuous reading facilities. It should be noted in this connection that there are very few texts in the medical sciences in Braille available for students in this country.*

If there are other blind students in the college, the expense of a reader may be reduced by group study and reading. A very satisfactory arrangement of this sort was made by three of our members, who shared the expense of an upper classman for reading and help in laboratory subjects. For students who cannot afford this added expense, aid may sometimes be had from state appropriations or the funds of private organizations. A number of states have made special provision for aiding blind students in colleges and in professional schools, the per capita amount ranging usually from $300 to $500 a year. State aid for this purpose is sometimes given also by rehabilitation boards.†

Fulfilling Laboratory Requirements

Contact with blind students and physicians and with college instructors indicates that the only serious difficulty encountered by sightless students in the osteopathic curriculum is in the laboratory subjects, especially in those requiring the use of the microscope. As may be seen by the summary on page 23, the subjects requiring laboratory work—anatomy and histology, physiology, chemistry, biology, bacteriology and pathology—are given the first two years. Of the total number of hours in lecture and laboratory instruction in these subjects, 57 per cent is in the laboratory; and of the total number of unit hours for the entire four-year course, the time occupied in laboratories is about 24 per cent. We may estimate, therefore, that in one-eighth of the curriculum, the blind student must work in ways in which the handicap of blindness is reduced to a minimum. The attainments of blind students and practitioners seem to demonstrate that ingenuity, patience, and systematic use of a seeing person enable one to arrive at an intelligent understanding of the laboratory sciences even though the student does not actually take part in every detail of the procedures.

The best seeing assistance for a blind student in laboratory work is probably that of a classmate. As the classes are usually arranged, students work in pairs or in small groups under close supervision. If a blind student has made a thorough study of the laboratory manual before going to class, and follows carefully his classmates' interpretation of slides and test-tube reactions, he acquires a good working knowledge of what goes on. One student writes as follows: "In my course in histology, embryology, pathology and bacteriology, I attended laboratory periods with a classmate who described vividly what he saw through the microscope. His descriptions were not in textbook style but simply a statement of what he saw. I also attended chemistry laboratory, studied my manual, saw and helped set up the apparatus, and the results and reactions were described to me in detail." In dissection a blind student can palpate muscles, nerves, viscera, etc. in addition to hearing the description of the student who is dissecting. In one college visited two of the sightless students were themselves performing some of the less exact incisions on cadavers. Manikins and skeletons are, of course, equally useful to the blind person in anatomy and physiology. As a substitute for textbook cuts and diagrams, blind students have devised ways of reproducing anatomical drawings in clay or plasticine or by using a tracing-wheel on Braille paper. A student who is to be graduated this year describes his method: "As substitutes for pictures and drawings I used diagrams made from penciled outlines on Braille paper. The outlines were perforated by means of a tracing-wheel. By varying the depth of the cloth over which the tracings were made, different degrees of depth or size were indicated; cavities or spaces were left blank; and the intervening tissues were represented by very fine perforations. If the third dimension was necessary, I had models made in clay or plasticine." Almost without exception the physicians reporting in this study have used these or similar substitutes and devices.

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* A list of embossed literature in the medical sciences will be found at the end of the bulletin.

† This information for individual states may be secured by writing to state boards of education or to the American Foundation for the Blind.

In both didactic and laboratory work, a blind student can, of course, take notes with a Braille slate. A few have used the notes taken by their classmate-readers. Some have had portions of textbooks and the more important compends hand-transcribed. Two prepared notes and digests on anatomical subjects in Braille before going to college.

The important thing to urge upon blind students in meeting laboratory requirements is that they should not rely unduly upon what they obtain in the ordinary way from fellow students; but should provide for supplementary paid assistance wherever it is necessary. Two of our students have secured this additional aid from classmates in exchange for help in other subjects.

The blind student who is able to adjust himself to the requirements of the first two years should have clear sailing throughout the remainder of the curriculum. In the third and fourth years, during which the principles and technique of osteopathy are taught and later applied by practice in clinics or hospitals, the sightless student is at no disadvantage with his seeing associates; indeed, in this part of the training period, he very often meets with conspicuous success.

State Board Examination

With two exceptions the blind applicant for licensure has had no difficulty before examining boards. In these instances, objection was made on the ground that since the law required the examination to be in writing, the blind candidates were automatically eliminated. Other states having similar clauses have construed the purpose of the law to distinguish between oral and written examinations; and have not quibbled over the method. About a third of the sightless osteopathic physicians were permitted to use a typewriter, a separate room being provided for the purpose; and the questions were read to them, the applicant frequently taking them down in Braille. Another third employed or were provided with an amanuensis or stenographer; and in seven instances, an oral examination was substituted for the written. This last would seem quite inadequate, and unfair to both the applicant and the board.

Of the states represented in this study, six required practical tests in addition to the written and oral. In those involving the use of the microscope, the blind applicant was usually given special consideration. Two of the boards substituted a certain number of oral questions on microscopic subjects for each slide; another arranged to have the specimens described to the applicant and interpreted by him; two other boards waived the practical tests, the applicants' grades in the other subjects being high enough to meet the required average without them. Where examination of cases or bedside diagnosis is part of the examination the blind person, of course, qualifies in the same way as the seeing.

Attitude of Blind Practitioners

In all the contacts made by the Foundation with blind students and physicians, we have found very outspoken opinion on the matter of training and licensure. Blind members of the osteopathic school are as eager as the seeing for raising professional standards. They would be the first to discountenance any letting down of the bars to enable a blind person make college or state board grades. The demonstrated ability of many blind students and practitioners, apart from anything else, would make such a policy quite unwarranted. The only thing a sightless applicant should ask of professional schools or examining boards is that he be given an opportunity to show his ability. He should feel that it is not his blindness which is on trial, but the knowledge and skill which he as an individual can bring to the actual demands of the profession.

V

THE PRACTICE OF BLIND OSTEOPATHIC PHYSICIANS

THE osteopathic profession, as we have indicated elsewhere, is a general field which permits of several types of practice. It has come to be as feasible for an osteopathic physician to specialize or limit his practice according to his interest and ability as for practitioners of the medical school. In the same way and by the same token, the blind members of the profession determine the nature of their practice, the only difference being that for them scope is sometimes limited by necessity rather than choice. The sightless physician naturally tends to restrict his work to those departments in which sight is of least importance; and where his special abilities, such as tactile and auditory sensitivity, will most count.

Chronic and Acute Practice

Ailments coming within the scope of a general practice may be classified roughly as chronic and acute. Chronic cases ordinarily require treatment over a longer period than the acute and are usually given at the physician's office. Acute work is largely resident or hospital. Since it obviates travelling complications and presents fewer occasions where sight is necessary, chronic work constitutes a large part of the practice of blind physicians. Of the 43 estimating the proportion of chronic to acute practice, 86 per cent report chronic or office work as making up three-fourths or more of their practice; and of this number, one-half say that over 90 per cent of their work is chronic.

Specialization

A relatively high proportion of blind practitioners specialize or have a general practice with emphasis upon a specialty. The sixteen coming within these categories are distributed as follows:

Heart and Lung	4
Postural and Muscle Re-education	4
Neurology	2
Gastro-intestinal	1
Gynecology	1

"Finger" Surgery	1
Podiatry	1
Blood and Venereal	1
Physical Diagnosis	1

Teaching in colleges of osteopathy is another field where blind physicians are found. Three in our study are now on college faculties, and two others were so engaged at one time. Clinic and hospital work also offer opportunities. Several included in the above list of specialties are on hospital staffs. A few of our correspondents are of the opinion that certain phases of industrial medicine and the osteopathic care of athletes are also well adapted to the practice of blind physicians. Some beginnings have been made in this direction.

It may be pertinent to note instances of blind physicians of the medical school who have done distinguished work in the specialties. Dr. Robert Babcock of Chicago, blind since boyhood, is an outstanding example in heart and lung specialization. In addition to a large consultative practice, he has written several books on the subject.* Dr. Edward Collins, diagnostitian for one of the best-known sanitariums in the Middle West is another conspicuous example.

Conditions of Practice

The question of primary importance to a blind person surveying the possibilities of a career in osteopathy is the extent to which sight is necessary and how it may best be obtained. As our survey has brought out some difference of opinion among members of the profession, it may be well to quote a few typical expressions on this point.

"Inspection, which involves the sense of sight, is the greatest natural agency for correct diagnosis."† Another physician comments on this statement as follows: "It is only greatest in those who are distinctly visual and depend on it entirely, while in an auditory or manu-motor type, hearing and touch are the greatest assets. Therefore that sense which is used the most becomes the greatest natural agency in diagnosis. Sight, hearing and touch are of equal importance and where one is lacking the remainder become more acute."*

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* Babcock, Robert H., M.D. "Diseases of the Heart and Arterial System." Appleton, 1903. "Diseases of the Lung," Appleton, 1907. "Your Heart and How to Take Care of It," (a book for laymen) Appleton, 1928.

† O. J. Snyder, D.O. (seeing).

A man who has wide experience in teaching blind students in osteopathic colleges and in consultation work with blind practitioners has this to say on the subject: "Eyesight is the least important of the special senses from the standpoint of examination, diagnosis, prognosis and treatment. In practice the accentuation of the remainder of the special senses compensates for the lack of sight, except in some of the specialties where eyesight is an absolute essential as in microscopy and surgery. In other specialties, as in chest work, the loss of the special sense of sight is an asset rather than a hindrance. Many diagnostitians in examination work, especially in palpation, make a practice of shutting the eyes so that they may the more readily concentrate."†

An analysis of our questionnaires suggests certain ways of conducting a practice by which the difficulties incident to blindness are reduced to a minimum. Almost without exception blind physicians in all types of work are of the opinion that there are certain conditions in diagnosis and treatment which require sight, and for which no substitute can be made. It would seem a first requisite of successful practice, therefore, to discover and gauge one's limitations, and then to guard scrupulously against over-reaching them. (This, of course, might also apply to the seeing physician.) There are many things that a blind practitioner with ingenuity and skill can actually perform which the majority find inexpedient in ordinary practice. As a matter of economy and efficiency, he will not spend his time in trying to do those things which are better done by a seeing person. Another consideration which has been drawn to our attention: he will remember that the world of seeing people, who seldom have an opportunity to know what blind people are like or what they can do, may be a bit skeptical, or perhaps prejudiced. It should not be necessary to suggest that a man or woman who has the intelligence to complete the rigorous course of training given in colleges of osteopathy will have the wit to recognize his physical limitation. He will not essay the impossible—nor the possible, for that matter, if it seems impracticable. To do this, of course, requires a keen sense of proportion and a good-humored perspective on one's ego.

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* Erwin I. Schindler, D.O. (blind).

† George J. Conley, M.D., D.O. (seeing)

The blind physicians and students with whom we have come in contact, while stressing these points for prospective members of the profession, give little evidence that it is needed. With few exceptions they have made systematic and adequate arrangements for sighted assistance. Of the total fifty, nineteen are in partnership with seeing associates, to whom they may refer when sight is required. Ten of this number have married seeing osteopathic physicians and carry on a joint practice. In two instances similar arrangements have been made with a seeing brother or sister. Three others of our group, while not in active association, share offices including nurse and laboratory assistance with other seeing people in the profession, and so have the advantage of trained eyesight whenever needed. Still three others are working on a commission basis under the direct supervision of a seeing physician; and ten, who have not entered into any professional association, employ a nurse or office assistant. Seventy per cent of our blind practitioners, therefore, are assured of trained assistance for those phases of diagnosis or treatment where sight is required. In the case of the remaining thirty per cent, not regularly employing an assistant or in association with other physicians, a number have wives or other members of the family whom they have trained as assistants; or else refer patients to other practitioners for all conditions involving sight. From this analysis of the ways of conducting a practice, it seems evident that competent seeing assistance is indispensable in certain technical procedures.

Nurses or Attendants

The average busy clinician nowadays finds a nurse or office attendant almost a necessity. It is assuredly so for the successful blind practitioner. The ordinary duties of an office attendant are to receive patients, answer the telephone, make future appointments and prepare patients for examination or treatment. She may also check up on weight, assist in taking laboratory specimens, and sometimes make the simpler tests herself; she sterilizes instruments, looks after supplies and, in the absence of other clerical help, takes dictation of case records and does the bookkeeping and correspondence.

In addition to these customary services, the blind physician requires assistance in certain other ways. It is frequently helpful if his attendant in receiving a patient notes any abnormalities in color, gait or other superficial appearances which may have significance in diagnosis. She takes temperatures, helps in reading blood pressure, and if physiotherapy equipment is used will assist with the apparatus requiring sight. A still further function of the attendant, if she has the ability, might be the briefing of professional articles or other material of special interest. If this is impracticable, it might be well to subscribe to a bureau which will index and summarize the current literature of one's specialty.

Substitutes and Adaptations

While the occasion may not often arise where a blind physician will be called upon to act without assistance in procedures involving sight, such as reading temperature, blood pressure and administering hypodermics, he should be prepared to manage independently in case of emergency. His active participation in directing and checking the work of seeing assistants is recommended for all occasions. It not only makes for greater efficiency on the part of attendants but reassures the patient in the quality of the service he is receiving. Our questionnaires reveal considerable ingenuity and invention along these lines.

In taking blood pressure it is usual for the physician to pump the apparatus and feel the pulse while the attendant reads the dial according to signals. A number of practitioners occasionally use an apparatus (such as the 'Tycos') which has been specially adjusted for them with removable cover and raised dots inserted on the dial at every ten or twenty degrees. The accuracy of this method is, however, questioned by some of the group. Allowing the patient to read the dial is also open to criticism, both because of possible inaccuracy and the psychological effect it is said to have in increasing blood pressure.

The reading of a clinical thermometer is not possible for a blind person. Until an instrument is invented which will enable the blind to read body temperature in some such way as the Braille thermometer enables them to read atmospheric temperature, they must refer to a person with sight. A skillful physician can, of course, judge temperature by touch with a fair degree of accuracy. If he is unattended on a residence call, and there are indications of abnormal temperature, he may ask someone in the household to read the thermometer; this failing, the temperature may be taken and the thermometer read at a later time. In cases where accuracy is required it is doubtful if the reading should ever be left to an untrained person.

The administering of hypodermics is usually entrusted to a nurse or associate. Occasionally a physician makes the injection himself after the attendant has filled the syringe and prepared the surface. A few mention a 'carpule' syringe which comes already prepared and may be handled more easily by a blind person. Here again, however, the psychology of the patient should be considered: a sightless practitioner might be ever so skillful and yet fail to make his patient confident of his ability in such a process.

The ability of a blind physician in making orificial and skin examinations where inspection plays an important rôle, is difficult to gauge. Obviously enough it becomes second nature for the blind person to make substitutions where sight is essential: information ordinarily received through the eye comes to him through the media of touch, hearing and smell. Palpation in osteopathic practice has been developed and is utilized in diagnosis to a greater degree than in any other school of therapy. Many leading gynecologists in the medical as well as in the osteopathic school stress the importance of bi-manual examination of the pelvis, where touch is the only determining factor. The super-development of this special sense in the blind physician, therefore, brings to him information in making examinations of the pelvis as well as of the orifices of the head which in a measure supersedes knowledge derived through inspection. Nevertheless, when sight is essential it is safe to say that the blind practitioner will not take chances where there is any probability of error, but will check up on his findings with a seeing associate or specialist. One physician, writing of inspection as applied to skin diseases, said: "The character of an eruption is only one of the objective findings in an eruptive disease. The history of the case, physical examination other than the skin, are often a more valuable aid in making an exact differential diagnosis than the appearance of the skin lesion. In all doubtful cases it is an easy matter to have consultation and clinch the diagnosis."

The Laboratory Sciences and Diagnosis

One unfamiliar with the relation of present-day medicine to the laboratory sciences may wonder how a blind person can qualify in this aspect of a therapeutic profession. Laboratory tests according to some authorities contribute about 30 per cent of assistance in making a diagnosis. The technical procedures—that is, actually making the tests by microscopy, chemical re-agents, etc.—is not, of course, possible for a person without sight. The ability to make laboratory tests, however, is of small importance in a community having the specialized services of laboratories and pathologists. In common with the great majority of seeing physicians, the blind practitioner employs technicians to assemble for him the details of many of the special examinations involving X-ray, microscopy and chemical tests. He then sums up the case, makes his own deductions and his diagnosis. The following excerpt indicates the place of the laboratory sciences in general diagnosis:

"The deficiency in the acquirement of the laboratory sciences due to the lack of sight is more theoretical than real. The average doctor does not do his own laboratory work. It is true that many do make the simpler blood, urine and sputum tests. In isolated communities it becomes imperative that the doctor do much of the practical laboratory work, whereas in the more congested districts recourse can always be had to laboratory specialists. It is not necessary that the practitioner should personally pass upon the clinical findings of the microscope, test-tube or the X-ray. He bases his findings and his conclusions upon the interpretation of the reports received from the laboratory specialist, not necessarily upon his own findings from personal observation. The importance is not so much in observation of the specimen under inspection, as it is in the interpretation and application of the findings.

"The average busy clinician hires a technician, usually from the laity, for this detail work and is content to base his judgments upon their findings. . . . . In actual practice he does very little of the detail work of the examination. His function is to interpret and to correlate their reports. He fits the various pieces of the puzzle together and makes of the completed whole a diagnosis."*

In general diagnosis and the application of the principle of osteopathy, the blind practitioner has an equal opportunity with the seeing. The records of osteopathic colleges show that blind students often rank exceptionally high in the diagnostic or clinical subjects. A former president of a college of osteopathy writes: "There is no question that sightless persons are capable and thoroughly competent in their touch qualities to apply the principle of osteopathy to its utmost extent. In my experience with these persons I have found their general diagnostic ability if anything above the level of general practice."†

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* George J. Conley, M.D., D.O. (seeing) "The Blind and the Healing Art." The College Journal of the Kansas City College of Osteopathy and Surgery. April, 1926.

† James B. Littlejohn, D.O. (seeing)

VI

THE ECONOMICS OF THE PROFESSION

IT sometimes happens that a physician's location is determined for him before he leaves his professional school. He may have a home community with a nucleus of friends, business or other connections to help him launch his practice; if not, there are several factors he should take into consideration before making his choice.

State laws governing the scope and practice of osteopathy may be a determining factor. As we have indicated in the section "Training and Licensure," osteopathic practice in some states is limited to manipulation; in others, it is given the same recognition and privileges as the established medical school. One man of course may choose to be a pioneer and blaze a trail in unfriendly territory, while another will try to establish himself among people who are already educated to his school of practice. Because of the small number of blind practitioners included in our study, it reveals little of geographical preferences. Of the total 50, 17 are practising in Eastern States; 20 in the Middle West; 7 in the Far West; and 6 in Canada.

For the majority of practitioners, the law of supply and demand as related to their special field of practice will determine the choice of location. Many find that in rural districts there is a greater demand for competent general practitioners. It is usually agreed that a country or small town practice is more easily built up; on the other hand, once a foothold is secured in an urban community, income probably exceeds that of a country practice. The matter of laboratory and hospital facilities may also enter into the choice of location. For the blind person this is a very serious consideration. Unless he is working in association with a seeing practitioner, he will find it expedient to locate in a community where there are laboratories and hospitals, and where consultation can be secured when necessary. Other things being equal—as the economists say—a practitioner should settle in a congenial environment, and here enter such matters as race, religion, social background, and the like. A community is more ready to accept a person who shares their civic and social life and whose interests are bound up with theirs. The successful physician is seldom an outsider.

Making Oneself Known

Even when a practitioner is not a natural "joiner," "mixer" or "good fellow," he will find it greatly to his advantage to cultivate social contacts and technique. It is assumed that the blind practitioner has attained a normal social and psychological adjustment with the seeing world, and moves in it with ease and confidence. The item on the questionnaire which inquired into organization membership and activities reveals the fact that the majority of blind physicians are awake to the value of social and professional connections. It is noticeable that the more successful from an economic point of view take an active part in organizations, clubs, fraternities, and in community projects of all kinds.

Our group express less interest in professional publicity as such, for the reason that the normal ways of getting acquainted and demonstrating one's ability are more effectual than anything bordering on commercial advertisement. Announcement cards, an occasional form letter, or sending out educational and health literature such as is published by the A. O. A. are the usual means of attracting public notice. A competent physician will find that "satisfied patients are his best advertisers." In the business world it is what is known as "the endless chain."

Professional Advancement

Success in a therapeutic science requires that a practitioner be constantly on the alert to acquaint himself with new developments in theory and technique. This involves keeping in touch with a considerable volume of current literature in the medical sciences, attending lectures and society meetings, taking post-graduate courses, and keeping in active coöperation with the activities of the national, state or regional associations. The value to our group of membership in the American Osteopathic Association is evidenced by the fact that over two-thirds belong, and approximately as many also belong to their state or local organization.

Group Association

There is a marked tendency among blind osteopathic physicians to enter into partnership or association with other seeing practitioners. This method of conducting a practice recommends itself both as a solution for lack of sight and for reasons of economy and efficiency. Of our group of fifty practitioners, nineteen carry on a joint practice with seeing physicians; three work on a commission basis; and three others have an independent practice but share offices, attendants, and equipment with other physicians. A few are associated with a well-organized group of specialists, who, while conducting their practices independently, share the expense of a laboratory and technician, nurse, reception-room attendant, switch board operator, physical therapy equipment, and the like. Some such arrangement would seem to be most advantageous for a blind physician. It assures him of seeing assistance at all times and reduces his overhead appreciably.

We wish especially to point out to the blind practitioner the importance of an arrangement by which someone takes charge of appointments, case histories and accounting. Whether or not laxity in this respect is characteristic of members of the profession, our study of blind practitioners shows a regrettable deficiency here.

Income

No one should enter a therapeutic profession with the idea of amassing a fortune. If he does, he will probably be disappointed. The most that the average, conscientious practitioner can expect is an income which will allow him to live in reasonable comfort and dignity in the community he serves.

No figures are available showing the incomes of osteopathic physicians; we cannot, therefore, compare them with other professional or occupational groups. The range is undoubtedly influenced to some extent by the location of the practice and the economic status of the clientele. In the long run a city practice probably yields more than one in the country or in a small town; but it takes longer to build up and overhead expenses are much higher. Specialization in medical practice is generally thought to be more profitable; but there are no figures to substantiate this. One factor which does definitely influence earning capacity is the number of years in practice. The first two or three are sure to be very lean. If a young practitioner hits his stride by his fifth year, he is probably doing very well.

In this study we have tried to assemble a few estimates of income to indicate to the blind prospective student something of what is to be expected in the practice of osteopathy. Of the 50 physicians answering the questionnaire, 37 report their incomes during their last year of practice, and some for the first and fifth years. The paucity of the numbers in our group, of course, renders such data of little value except to mark general trends. The median income for the 27 reporting for the first year of practice is $1200; for the 15 reporting for the fifth year it is $2500; for the 37 giving income for the past year, it is $3000. The following table shows the incomes of the 37 blind physicians during the last year by the number of years in practice.

ANNUAL EARNINGS OF BLIND OSTEOPATHIC PHYSICIANS IN 1928–1929

ANNUAL EARNINGS	TOTAL NUMBER	YEARS IN PRACTICE			
		1 and under 3	3 and under 5	5 and under 10	10 and over
Under $500	1				1
500 and under 1000					
1000 “ “ 2000	7	2	2	2	1
2000 “ “ 3000	5	2		2	1
3000 “ “ 4000	7	2		3	2
4000 “ “ 5000	7	1		4	2
5000 “ “ 7000	6			1	5
7000 “ “ 9000	3				3
9000 and over	1				1
TOTAL NUMBER	37	7	2	12	16

From this tabulation it will be seen that 22 per cent have incomes under $2000—7 out of 8 of the number in this group occurring between $1000 and $2000. In the $2000 to $5000 group, there are 51 per cent; and in the group earning over $5000, there are 27 per cent. The concentration of practitioners in the medium income group of $2000 to $5000 probably has significance.

The numbers in our group are also too small to show any definite relation between income and years in practice. It will be seen, however, that in the $2000 to $5000 group, 14 out of 19 have been in practice at least five years; and of the 10 practitioners in the group of $5000 or over, all but one have been practising at least ten years.

The figures in the above table, it should be noted, represent gross income,—that is, with no deduction for office rent, attendants and the like. There is a considerable margin of difference between gross and net earnings. It is sometimes estimated that 25 per cent of the gross income is a fair estimate of overhead expense; in a city practice 50 per cent is not considered unreasonable.* It should also be remembered that treatments and collections do not always tally. Every physician must allow for a certain amount of bad debts and free services.

To a true physician, it must be repeated, the financial returns represent only a small part of his rewards.

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* Hoad, Hortense. "The Profession of Medicine." American Council of Education, Vocational Monograph Series, No. 1.

CONCLUSION

SUCCESS in a science of healing presupposes certain obvious qualities and conditions. A person must have innate ability, good training, be temperamentally adjusted to the demands of the profession, and congenial to the environment in which he practises.

At its inception osteopathy was little more than a therapeutic agent for manipulation and adjustment. After half a century osteopathic practitioners and adherents claim for it the recognition of a complete system of healing capable of dealing with all phases of diagnosis and treatment.

This evolution has resulted in a slight re-orientation of the blind in the profession. For the basic and distinctive features of the science, their superior tactile abilities are of course a positive factor in good technique. In the other departments of medical practice they acquire their knowledge and experience in the same way as the seeing. It is only in the procedures of the laboratory sciences and in situations involving sight, that they must function through other agencies. The specialization and subdivision characteristic of modern medical practice, however, overcome what would otherwise be a disqualifying factor for the blind physician. He makes use of technicians, specialists, laboratory and hospital facilities in the same way as the seeing practitioner—the difference being, one does it because of anatomic necessity; the other as a matter of expediency or choice.

We would emphasize the following personal traits for the blind prospective student in this profession: a sound physique and a favorable personal appearance; scientific inquisitiveness and mechanical dexterity; a good memory; the ability to visualize readily from touch or description; a genuine liking for the work.

On the educational side, a blind person offering himself for matriculation to a college of osteopathy should have rather more than the minimum preparation. It is especially desirable that he have a thorough grounding in the basic sciences—physics, chemistry and biology—so as to make the laboratory subjects of the college curriculum as profitable as possible.

Apart from personal and educational requirements, a blind student entering upon osteopathic training should have adequate financial backing, that he may be assured of systematic help in his reading and laboratory work. This cannot be too strongly urged. The lack of proper sighted assistance places an unwarranted responsibility upon the colleges and is most unfair to the blind student himself. In this connection it may be well to quote the Principal of the Pennsylvania Institution for the Instruction of the Blind.*

"One important reason why we have not had more and greater successes among blind people in the professions is that we have not granted sufficient opportunities for thoroughgoing preparation. Where we have spent five dollars to provide these opportunities, totally inadequate, we must spend a hundred dollars to provide opportunities more nearly adequate and commensurate with the ability and handicap involved. Given these, our capable young men and women will be encouraged to enter the various professions, carefully selected in accordance with the ability and character deemed essential."

The matter of providing vocational information and counsel for blind students contemplating a professional career deserves more attention than it has received. Hearsay information or the spectacular accounts of the achievements of isolated individuals are unreliable media for selection and guidance. A number of blind osteopathic physicians in the present study have urged this point. Too often, it would seem, young men and women embark upon long and expensive courses of training for which they are not fitted or which lead them into over-crowded fields where they cannot compete. In order to reduce the number of vocational tragedies among blind youth, some comprehensive plan of counseling should be evolved and scientifically applied.

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*"Further Need of Professional Education for the Blind." By Dr. Olin H. Burritt. Annual Report of the Pennsylvania Institution for the Instruction of the Blind, Overbrook, Pennsylvania, 1921.

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APPENDIX I

QUESTIONNAIRE FOR SURVEY OF OSTEOPATHY

No.......
Name........................
Address.......................

Note: No information given in this questionnaire will be used so as to identify you except with your permission. Answers may be inserted in ink in the spaces following the questions or in Braille on separate paper. If you wish to treat any subject in greater detail, a letter supplementing the questionnaire will be most welcome.

1. What is the nature of your practice? General Specialized
   If specialized, in what department?
   What proportion of your practice is acute or resident, and what chronic or office work?
2. Are you connected with any college, hospital, sanitarium, clinic, or other organization?
   If so, what proportion of your time is so employed?
3. Do you maintain your own office or in combination with other porfessional persons?
4. Do you have the help of seeing people in any way in diagnosis or treatment?
   If so, for what purpose?
   How do you handle the reading of a clinical thermometer?
   How do you manage a blood pressure apparatus?
   What do you do in case of hypodermics?
   How do you make inspection as applied to skin diseases or inflammation of throat, nose, ears and other cavities?
   How do you obtain blood specimens for laboratory diagnosis?
5. In what percentage of your cases do you make use of laboratory diagnosis?
   How do you take care of this phase of your work?
6. With what specialists (osteopathic or medical) do you consult; and with what hospitals or clinics do you co-operate?
7. Do you use any electrical, heat, water, or light appliances?
   If so, please name them.
8. How long have you been practising?
9. How did you set about building up a practice?
   Did you start as an assistant or in association with another physician?
   Were you on a salary or commission basis?
   What methods of advertising do you use?
10. Approximately how many treatments do you give annually?
11. What is your approximate annual gross income from the profession?
    What was it the first year? The fifth year?
12. Do you employ a guide, clerk or nurse?
13. What methods do you use in record-keeping?

14. What was your education before entering a college of osteopathy?
   Elementary   High School   College   Post-Graduate
15. What part of this was obtained in a school for the blind?
   If any, what school did you attend?
16. Where did you receive your degree in osteopathy?
17. How did you fulfil your laboratory requirements?
   Did you devise any special methods which would be useful for a blind student to know?
18. Did you employ a reader?
19. How many blind students were in attendance at your college when you were there?
20. Have you taken post-graduate work?
   Or how else do you keep in touch with current developments in osteopathy?
21. What was the nature of the examination given by your state examining board?
   Were microscopic or other practical tests required? If so, were you given any special consideration? How did you write your examination?
22. In what state did you first get your license?
23. Items of personal history:
   How old are you?
   How much vision have you? Percent? How long have you been totally or partially blind?
   What was your occupation prior to your osteopathic practice?
24. Do you belong to your local or state professional association?
   Or to the American Osteopathic Association?
   Have you ever held office in such organizations or on a state examining board?
25. To what fraternities, clubs, or religious associations do you belong?
   In what community activities do you take part?
26. Would you advise a properly qualified blind man or woman to take up the study of osteopathy?
27. Is there need for additional Braille literature in your field?
   What do you suggest as most useful?
28. Can you give the names and addresses of other blind osteopaths?
   Or of blind medical physicians?

APPENDIX II

STANDARD CURRICULUM OF THE AMERICAN OSTEOPATHIC ASSOCIATION

SUMMARY OF DEPARTMENTS

ASSOCIATED COLLEGES OF THE A. O. A.

ANATOMY	*hours*
Descriptive	300
Dissection	250
Histology	175—150
Embryology	75
Approximately	750

PHYSIOLOGY	
Lecture	
Laboratory (minimum lab. not less than ⅓)	
	300

CHEMISTRY	
Inorganic	200
Organic	100
Physiological	175
	480

PATHOLOGY AND BACTERIOLOGY	
Bacteriology	150
Pathology	280
	430

COMPARATIVE THERAPEUTICS	
Comparative Therapeutics (contracting chemical and other methods with osteopathic methods)	76
Toxicology	36
Anesthesia	24
Narcotics and antiseptics	24
	160

HYGIENE AND SANITATION	
Hygiene and Sanitation	120

PRACTICE OF OSTEOPATHY	*hours*
History of Osteopathy	12
Principles	75
Technic	150
Laboratory diagnosis	60
Physical diagnosis	144
Diagnostic clinic	180
Physiotherapy	24
Gastro-intestinal diseases	
Cardiovascular diseases	
Dermatology	
Acute infectious diseases	
Nervous and mental diseases, etc.	
	1300

(Minimum number of treatments, 600, constituting clinical practice amounting to 300 hours)

SURGERY	
General	
Orthopedic	
Eye, ear, nose and throat	
Urology	
	320

OBSTETRICS AND GYNECOLOGY	
Obstetrics	200
Gynecology	
	660

Anatomy	750
Physiology	300
Chemistry	480
Pathology and bacteriology	400
Comparative therapeutics	160
Hygiene and sanitation	120
Practice of osteopathy	1300
Surgery	320
Obstetrics and gynecology	200
Total	4230

PUBLICATIONS OF THE AMERICAN FOUNDATION FOR THE BLIND

EDUCATION

Adaptation of Educational Tests for Use With Blind Pupils.
By *Kathryn E. Maxfield*.......................................75c

The Blind Child and His Reading—A Handbook for Teachers of Primary Braille Reading.
By *Kathryn E. Maxfield*...................................$1.75

The Dalton Laboratory Plan in A School for the Blind.
By *Helen Parkhurst* and *J. M. Ritchie*......................Free

Present Status of Instruction in Primary Reading in Residential and Day School Classes for the Blind.
By *Kathryn E. Maxfield*.......................................25c

VOCATIONS

Blind Dictaphone Operators and Typists in the United States and Canada.
Compiled by *Charles B. Hayes*..............................Free

Insurance Underwriting—A Study of the Business in Its Relation to Blind Agents.
By *Lela T. Brown* 50c

Osteopathy—Opportunities for the Blind in Training and Practice.
By *Lela T. Brown* 50c

LEGISLATION

Blind Relief Laws: Their Theory and Practice.
By *Robert B. Irwin* and *Evelyn C. McKay*.
Paper $1.00; Cloth $1.50

Laws Governing State Commissions and Departments for the Blind.
Compiled by *Evelyn C. McKay* 75c

GENERAL

Directory of Activities for the Blind in the United States and Canada.
Compiled by *Lotta S. Rand*..................................$2.15

Compilation of Braille Periodicals and of Inkprint Magazines Relating to the Blind.
Compiled by *Ida Hirst-Gifford* and *Ruth E. Wilcox*..........25c

Through Blind Eyes.
By *Maurice de La Sizeranne*. Translated by *F. Park Lewis*, *M.D.*
$1.35

Distributed but not published by the Foundation

PERIODICALS

Outlook for the Blind. A Quarterly Magazine. $2.00 a year

The Teachers Forum. For Instructors of Blind Children. Issued five times a year. 20c a copy; $1.00 a year

Prices include postage